IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of	Atty. Docket: 2004P00687WOUS
GHEORGHE SORIN STAN	Confirmation No.: 9390
Serial No.: 10/599,462	Examiner: J. L. ORTIZ CRIADO
Filed: SEPTEMBER 29, 2006	Group Art Unit: 2627

Title: METHOD AND DEVICE FOR WRITING MULTIPLE-LAYER OPTICAL DISCS

Mail Stop Appeal Brief - Patents
Commissioner for Patents
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REPLY BRIEF

Sir:

Appellant herewith respectfully presents its Reply Brief on Appeal as follows:

ARGUMENT

The claims recite in substantial form "monitoring a plurality of distinct input signals while focusing a write light beam in a focal spot at a target storage layer, an error on two or more of the plurality of distinct input signals indicating an axial focus spot displacement; and inhibiting the writing process in case of the axial focus spot displacement" as for example recited in claim 1. The plain meaning of this recitation is that in accordance with the present system, for an axial focus spot displacement to be indicated, there must be an error on two or more of the plurality of distinct input signals. The prior art references do not teach, disclose or suggest this claims recitation.

Kono shows an optical disk device capable of preventing a signal from being incorrectly recorded on another plane by a "focus monitor 16 [that] monitors an increase of an amplitude of a focus error signal issued by a focus error detector 7 and issues a light intensity reducing command signal to a light intensity controller 4 when the amplitude exceeds a specified reference." (See, FIG. 1, paragraph [0026].)

In another embodiment, Kono shows a "reflected light quantity monitor 17 detects the quantity of a light reflected from the optical disk 1 and monitors a drop of the amplitude of the light. When the amplitude becomes smaller than a specified reference, the monitor 17 issues a light intensity reducing command signal to a light intensity controller 4." (See, FIG. 2, paragraph [0034].) Kono is clear that "[t]he monitor 17, upon judging that the quantity of light is lower than a specified reference th2, send the light intensity reducing command signal at a low level to the light intensity controller 4. Then, the light intensity controller 4

immediately lowers the light intensity to the reproducing level." (See, paragraph [0038].) Another embodiment of Kono shows a "layer move detector 19 detects, on the basis of the address data, that the data plane followed by the light beam moves to other layer and issues a light intensity reducing command signal to a light intensity controller 4." (See, paragraph [0040].)

Accordingly, Kono teaches that in response to any signal indicative of axial focus displacement event, the light intensity is reduced.

The Examiner's Answer has taken a position on page 10 in section (10), Response to Argument that paraphrases Kono to support its position yet this characterization of Kono is not supported by the language of Kono. For example, the characterization that Kono in paragraphs [0022] and [0023] "describes an error on two or more of the plurality of distinct input signals indicating an axial focus spot displacement" is not supportable by the teachings of Kono.

Specifically, Kono in paragraph [0022] states (emphasis added):

> An optical disk device is capable of avoiding wrong recording or wrong erasing of signal in a region of the disk where the signal is not intended to record in the case that a focus control is disturbed during the recording operation due to disturbance, vibration or physical defect of the disk, or in the case of recording over plural layers.

Kono in paragraph [0023] states (emphasis added):

> The device, when recording signals in an optical disk having plural layers of data planes, reduces an intensity of the light beam to a level unable to record data in the optical disk with one of the following operations: (i) monitoring a focus error signal; (ii) monitoring an intensity of a reflected light; **or** (iii) detecting that an data plane on which the light beam focuses moves to another layer.

So in contrast with the position of the Examiner's Answer, Kono is clear that any one of the listed operations results in a reduction of the light intensity.

Similarly, the Examiner's Answer takes a position that "[i]t is very clear from the portion of Kono with respect to the portions cited, particularly paragraph [0038] and throughout the whole disclosure of Kono, that Kono describes and discloses indicating axial focus displacement as claimed, which set out "an error on two or more of the plurality of distinct input signals indicating an axial focus spot displacement".

In contrast with this position, Kono in paragraph [0038] states (emphasis added):

> When the focus control disturbed due to disturbance, vibration or physical defect of the disk makes the focus of the light beam go out of the first data plane S1, the focus error signal usually has the amplitude increase gradually as explained in embodiment 1, and the out-of-focus is detected. However, the focus error signal is obtained only when the light beam focuses nearly on the data plane, for example, about 10 mu m apart as indicated by pulses E1, E2 in Fig. 10. Therefore, if the S-shaped waveform Q1 is missed, an error is no longer detected. In the device of embodiment 2, the reflected light quantity monitor 17 detects the quantity of the light reflected from the optical disk 1. The monitor 17, upon judging that the quantity of light is lower than a specified reference th2, send the light intensity reducing command signal at a low level to the light intensity controller 4. Then, the light intensity controller 4 immediately lowers the light intensity to the reproducing level. The quantity of the reflected light is always low except when the light beam focuses nearly on the first or second data plane as shown in Fig. 6. Therefore, unlike the focus error signal, there is no problem of missing the momentary signal, and a focus servo failure is detected more securely. However, a sensitivity of detecting the out-of-focus of the light beam with a change of the quantity of the reflected light is lower than that with the focus error signal. Therefore, if a quick response is required, the servo failure had better be detected with focus error signal. Thus, the failure may be detected preferably with the focus error signal and the quantity of the reflected light.

So in contrast with the characterization of the Examiner's Answer on page 12, Kono is clear that the preferable system monitors both of the focus error signal and the quantity of the

reflected light and in response to a detected error on either signal, then the light intensity is reduced.

Regarding the position on page 12, fourth full paragraph of the Examiner's Answer, the failure described in Kono is described by Kono as a servo failure which the Appellants characterized as a mechanical failure since a servo is a mechanical part (see, Kono, paragraph [0038] set out above.

Regarding claims 14-19, the Examiner's Answer on pages 13-15 changes the position previously taken by the Examiner in the Final Office Action wherein previously it was admitted (see, Final Office Action, pages 2 and 7 and the Appeal Brief, page 13) that Harada fails to disclose "an error on two or more of the plurality of distinct input signals indicates the axial focus spot displacement", as for example recited in claim 14.

It is respectfully submitted that Harada in the cited sections nor in any section for that matters supports this change in position.

Harada in paragraph [0019] which is cited in support of this changed position (see, Examiner's Answer, page 14) states (emphasis added):

> The principle which detects that acceleration arose in the object lens 38 is explained. If the optical disc 10 is not a perfect circle or flatness has not come out, a motion of the object lens 38 which follows the pregroove of an optical disc may also become large, and acceleration may produce it in the object lens 38 in a focusing direction or a tracking direction. The object lens's 38 carrying out accelerated motion is exactly that the tracking servo control part 26 or the focus servo control section 28 sends current to the tracking coil 44 or the focus coil 42 so that the object lens 38 may carry out such movement. Therefore, the acceleration detecting means 44 can detect whether acceleration has also produced the object lens 38 with the tracking servo control part 26 **or** the focus servo control section 28 confirming whether supply the current more than the specified quantity.

Harada in paragraph [0025] which precedes paragraph [0026] which is cited in support of this changed position (see, Examiner's Answer, page 14) states (emphasis added):

> In Step S104, it is judged whether the acceleration from which the judging means 46 was detected by the acceleration detecting means 44 is over reference acceleration. If it is judged that it is not over reference acceleration, it will continue writing as it is, without changing writing speed. If it is over reference acceleration, it will shift to Step S106.

Harada in paragraph [0026] which is cited in support of this changed position (see, Examiner's Answer, page 14) states (emphasis added):

> The motor servo control section 24 and move servo control section 32 grade are controlled by Step S106 so that the writing speed control means 50 once interrupts data write. Once data write is interrupted, the motor servo control section 24 and move servo control section 32 grade are controlled by the following step S108 so that the writing speed control means 50 lowers one step of writing speed and resumes the writing of data.

So from Harada and in contrast with the position of the Examiner's Answer, it is clear that in Harada if a judged acceleration is over a reference acceleration, the writing speed control means 50 will interrupt data write (i.e., and error on one input signal). So Harada, like Kono monitors signals and responds when any one of the signals provides an indication.

Based on the foregoing, the Appellants respectfully submit that the independent claims are patentable and notice to this effect is earnestly solicited. The dependent claims respectively depend from one of the independent claims and accordingly, are allowable for at least this reason as well as for the separately patentable elements contained in each of

said claims. Accordingly, separate consideration of each of the dependent claims is respectfully requested.

In addition, Appellants deny any statement, position, or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, the Appellants reserve the right to submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

CONCLUSION

Claims 1-3 and 5-21 are patentable. Thus the rejection of the claims should be reversed.

Respectfully submitted,

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